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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/741,715	12/20/2000	Ryuki Tachibana	JP919990075US1	7535

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EXAMINER

REVAK, CHRISTOPHER A

ART UNIT	PAPER NUMBER
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2131

DATE MAILED: 09/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/741,715

Applicant(s)

TACHIBANA ET AL. 

Examiner

Christopher A. Revak

Art Unit

2131

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 06 May 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date May 6, 2003.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Information Disclosure Statement*

1. The information disclosure statement (IDS) submitted on May 6, 2003 is in compliance with the provisions of 37 CFR 1.97. The examiner is considering the information disclosure statement.

### *Priority*

2. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-19 are rejected under 35 U.S.C. 102(e) as being anticipated by Kabal et al, U.S. Patent 6,704,705.

As per claims 1 and 10, it is taught by Kabal et al of a system (means) and method for embedding additional information in compressed audio data. MDCT coefficients are extracted from compressed audio data. The MDCT coefficients are employed to calculate a frequency component for the compressed audio data.

Additional information is embedded in the frequency components obtained in a frequency domain. The frequency components are transformed into MDCT coefficients with the additional information embedded therein. The MDCT coefficients, that include additional information embedded therein, are used to generate compressed audio data (col. 2, lines 14-58; col. 4, lines 7-27; and col. 4, line 63 through col. 5, line 20).

As per claims 2 and 11, Kabal et al of a system (means) and method for updating additional information in compressed audio data. MDCT coefficients are extracted from compressed audio data. The MDCT coefficients are employed to calculate a frequency component for the compressed audio data. Additional information is embedded in the frequency components obtained. The additional information in the frequency component is changed as needed. The frequency components are transformed into MDCT coefficients with the additional information embedded therein. The MDCT coefficients, that include additional information embedded therein, are used to generate compressed audio data (col. 2, lines 14-58; col. 4, lines 7-27; and col. 4, line 63 through col. 5, line 20).

As per claims 3 and 12, Kabal et al teaches of a system (means) and method for detecting additional information embedded in compressed audio data. MDCT coefficients are extracted from compressed audio data. The MDCT coefficients are employed to calculate a frequency component for the compressed audio data. Additional information is detected from the obtained the frequency component (col. 2, lines 14-58; col. 4, lines 7-27; and col. 4, line 63 through col. 5, line 20).

As per claims 4 and 13, Kabal et al discloses of a system (means) and method that calculate a frequency component for the compressed audio data using a precomputed table in which a correlation between MDCT coefficients and frequency components are included (col. 2, lines 14-58 and col. 11, line 63 through col. 12, line 11).

As per claims 5 and 14, it is taught by Kabal et al that a system (means) and method that transforms the frequency components into MDCT coefficients by using a precomputed table that includes a correlation between MDCT coefficients and frequency components (col. 2, lines 14-58 and col. 11, line 63 through col. 12, line 11).

As per claim 6, Kabal et al discloses that the system (means) embeds the additional information in the frequency domain by dividing an area for embedding one bit by the time domain, calculates a signal level for each the individual obtained area segments while embedding the additional data into the frequency domain in accordance with the lowest level available for each frequency (col. 4, lines 7-27).

As per claim 7, it is taught by Kabal et al of a window function and a window length employed for compressing audio data, a method for generating a table including a correlation between MDCT coefficients and frequency coefficients. A basis is generated that is used for performing a Fourier transform for a waveform along a time axis. A window function is multiplied by a corresponding waveform that is generated using the basis. An MDCT process is performed for the result obtained by the multiplication of the window function and calculating an MDCT coefficient and correlating the basis and the MDCT coefficient (col. 3, lines 43-64; col. 4, lines 45-55;

col. 4, line 63 through col. 5, line 20; col. 11, line 63 through col. 12, line 11; and col. 19, lines 37-41).

As per claim 8, Kabal et al discloses that when multiplying the corresponding window function, a periodicity of the basis is employed to prevent generation of a redundant correlation between a frequency component and an MDCT coefficient (col. 11, line 63 through col. 12, line 11 and col. 15, lines 36-65).

As per claim 9, Kabal et al teaches that when multiplying the corresponding window function, the basis is divided into several segments so that redundant correlation between a frequency component and an MDCT coefficient are not generated (col. 4, lines 7-27; col. 11, line 63 through col. 12, line 11; and col. 15, lines 36-65).

As per claim 15, Kabal et al discloses of a computer readable program storage medium on which a program is stored for executing the table generation method in accordance with claim 7 (col. 1, lines 5-14 and col. 4, lines 38-47).

As per claim 16, Kabal et al teaches of a computer readable program storage medium on which a program is stored for executing the additional information and embedding method according to claim 10 (col. 1, lines 5-14 and col. 4, lines 38-47).

As per claim 17, Kabal et al recites of a computer readable program storage medium on which a program is stored for executing the additional updating method according the claim 11 (col. 1, lines 5-14 and col. 4, lines 38-47).

As per claim 18, Kabal et al discloses of a computer readable program storage medium on which a program is stored for executing the additional information detection method according the claim 12 (col. 1, lines 5-14 and col. 4, lines 38-47).

As per claim 19, Kabal et al teaches of an electronic watermarking apparatus. An information embedding device for embedding additional information in compressed audio data. A detection device for detecting said additional information from said compressed data. The information embedding device (means) includes extracting MDCT coefficients from the compressed audio data, employing the MDCT coefficients to calculate a frequency component for the compressed audio data, embedding additional information in the frequency component obtained a frequency domain, transforming the frequency components into MDCT coefficients that includes embedded additional information, and using MDCT coefficients, in which additional information is embedded, to generate compressed audio data. The detection device extracts MDCT coefficients from said compressed audio data, employs the MDCT coefficients to calculate a frequency component for the compressed audio data and for detecting when additional information in the frequency component that is obtained (col. 2, lines 14-58; col. 4, lines 7-27; and col. 4, line 63 through col. 5, line 20).

### ***Conclusion***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Please refer to PTO-892

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher A. Revak whose telephone number is 571-272-3794. The examiner can normally be reached on Monday-Friday, 6:30am-4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz Sheikh can be reached on 571-272-3795. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CR  
*CU*  
September 21, 2004

Christopher Revak  
AU 2131  
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9/21/04